

Appendix C

Sources and Qualifications of Data for Mental Health Practitioners and Trainees

American Medical Association 2002–03 Physician Characteristics and Distribution in the United States

Scope of Data. Data are derived from the American Medical Association's (AMA) Masterfile, which contains current and historical data on all physicians practicing in the United States. Psychiatrists in the Masterfile include physicians who self-designated their practice specialty as psychiatry. This designation is determined by the largest number of professional hours reported by the physician on the AMA Physicians' Practice Arrangements (PPA) questionnaire, a rotating census that is sent to approximately one-third of all physicians each year. Data presented in the Physician Characteristics and Distribution in the United States are based on the self-designated practice specialty coding contained in the AMA Physician Masterfile. Data on medical residents and inactive psychiatrists have been excluded to reflect clinically trained and clinically active psychiatrists more accurately.

Limitations. Because the AMA Masterfile includes physicians who are self-designated or self-identified as a psychiatrists, the data may include some physicians with no specialty psychiatric training.

2000 American Psychiatric Association Membership Data

Scope of Data. The 2000 American Psychiatric Association (APA) Membership estimates were taken from the December 2000 APA membership database. At that time, the total APA membership was approximately 37,839, which included 26,258 clinically trained psychiatrists believed to be actively practicing in the United States. The remaining APA members were disqualified as they fell into one of the following membership categories: psychiatric resident, medical student, corresponding members and fellows; inactive members, associates, fellows; honorary and distinguished fellows, and members not practicing psychiatry in the United States.

Limitations. The APA membership data are limited in that not all of the nation's psychiatrists are members of the APA. However, unlike the AMA Masterfile data, all psychiatrists in the APA membership are board-certified or board-eligible and have some specialty psychiatric training.

1988–89 American Psychiatric Association, Professional Activities Survey (PAS)

Scope of Survey. The 1988–89 APA PAS gathered data on both APA members and nonmembers who had identified themselves in the AMA Masterfile as primarily specializing in psychiatry. APA members and nonmembers were combined and cross-checked against the APA membership file in order to remove duplicate records, resulting in a residual list of 10,091 self-designated psychiatrists and 34,164 APA members.

Response Rate. Of the 34,164 APA members included in the study, 23,126, or 67.7 percent, responded to the survey. The sample of 10,091 self-designated psychiatrists yielded a response rate of 28.9 percent, or 2,922 completed surveys. Of the 2,922 completed surveys, 341 respondents were found not to be psychiatrists, and 125 psychiatrists were already members of the APA. The remaining total of 25,582 yielded 19,498 "active" psychiatrists (excludes psychiatrists who are residents or fellows, retired, or not primarily active in psychiatry), of whom 17,930 were APA members and 1,568 were nonmembers.

Data Limitations. In order to assess potential sources of survey nonresponse bias, an analysis was conducted in which demographic characteristics of respondents were compared with those of nonrespondents. Although this analysis revealed no major differences between the groups, other factors may have affected response. Other possible limitations may include self-reporting error of psychiatrists with respect to the recollection and estimation of weekly and monthly activities (Dorwart et al. 1992).

The 1998 National Survey of Psychiatric Practice

Scope of Survey. The APA National Survey of Psychiatric Practice (NSPP) is a biennial survey of 1,500 randomly selected APA members. The primary purpose of the survey is to gather information at the physician level to assess the current status of psychiatric practice and to track trends in psychiatry.

Response Rate. Of the 1,500 members included in the study, 1,076 (71.9 percent) completed the 1998 NSPP. Of those who completed the survey, 976 are considered active in psychiatry (excludes psychiatrists who are either retired or temporary not in psychiatric practice).

Data Limitations. Because this survey does not include responses from nonmembers of the APA, caution should be exercised when comparing these data with the 1988–89 APA PAS estimates. Although this survey obtained a good response rate and included a very large number of respondents, the findings may be subject to some response bias. To reduce the impact of this bias, the data from respondents were weighted against the survey sampling frame (all APA members believed to be active in psychiatry) using APA membership information (e.g., age, gender, race/ethnicity).

Psychology

The American Psychological Association Member Survey

Sources and Qualifications of the Data.

Who is to be counted as a mental health services provider in psychology? Not all psychologists are trained for health service provider roles, and not all of those with the necessary training are actively engaged in providing these services. In order to estimate the number of psychologists who are qualified to function as health service providers and the number who actually deliver relevant services, it was necessary to consider the type and amount of training and the acquisition of the appropriate credentials for delivering those services. This required the examination of several variables.

- **Licensure as a psychologist**—In all 50 States and the District of Columbia, licensure as a psychologist by a State board of psychological examiners is required for the independent

practice of psychology. As is the case with most professions, these licensing statutes are designed in part to protect the public by ensuring that minimum training and competency requirements have been met by practitioners.

- **Doctoral degree in psychology**—A significant amount of advanced and highly specialized training is required in order to independently provide the full spectrum of mental health services. In psychology, the doctoral degree meets this requirement, and this definition has been incorporated into State licensing laws and criteria used by third-party payers to recognize psychologists as eligible for reimbursement for their services.
- **Training in mental health services**—Only some of the basic subfields in psychology deal directly with the provision of health and mental health services. These are clinical, counseling, and school psychology. Although these three fields constitute those for which graduate training programs are accredited, a host of other postgraduate specializations exist in which psychologists can earn additional credentials (e.g., forensic psychology, clinical neuropsychology, behavior therapy, family psychology, and clinical hypnosis). Both field of degree and current major field were considered in this analysis.

Reported counts or estimates of mental health service providers in psychology do vary as a result of the differential application of these criteria by the individual counters. Examples include the counts of licensed psychologists by State boards, which often fail to account for the fact that some individuals may be licensed in more than one State—a situation characteristic of large metropolitan areas such as Boston and New York, or areas that are densely populated and near state borders, such as the Baltimore-DC-Richmond metropolitan statistical area. Dual licensure will be more common in such areas due to the proximity of State borders and the density of population. In addition, early versions of State licensing laws did not specify degree level as a major criterion, with the result that individuals with less than a doctoral degree may have been “grandfathered” in when new statutes were established.

Another problem with relying on counts of licensed psychologists provided by the States is that certain States do encourage individuals in other non-health-service psychological subfields (e.g., in-

dustrial/organizational and experimental) who provide other kinds of services (organizational consulting, research and statistical services) to get their licenses. These people should not be counted among the clinically trained.

The APA Member Survey. The majority of data on psychologists was derived from the 2000 Member Survey, with updates for 2002 as available. The survey is no longer conducted every four years, but is sent out to members on a rolling basis as pieces of information change in their files (e.g., mailing address) with interim updates in intervening years when some piece of data changes in a record (such as the mailing address), or as new members join. It is intended to be a census of all APA members. Its purpose is twofold: to provide updated individual listings for publication in the employment and professional activities directory and to describe and monitor changes in the characteristics of APA members.

The questionnaire asks for updated information including current address, e-mail, phone, and fax information, date of birth, field and year of highest degree, major field and specialty areas, position title, employer, and licensure status. Most of this information appears in the Directory listing. The majority of this information is published in the Directory listing. Section II asks for more detailed information on (1) the nature of the individual's employment, such as his or her primary and secondary employment settings, and a ranking of the three top work activities that the person performed for each setting; (2) the individual's involvement as a psychologist in specific activities during the past 3 years; and (3) additional demographic information such as race, ethnicity, and receipt of professional degrees in areas other than psychology.

Procedures for Identifying Health Service Providers in Psychology. As previously mentioned, individuals who are trained or employed in psychology work in a wide range of subfields and career roles. Thus, the criteria for inclusion as an active health service provider in psychology were as follows: (1) the individual was currently a U.S. resident; (2) the individual had earned a doctoral degree; (3) the individual indicated that he or she was licensed by one or more States for the independent practice of psychology; (4) the individual reported being employed in psychology; and (5) the individual was involved in the provision of health and mental health services.

Those who are clinically trained constitute a slightly larger group, including all of the above, as well as those who (1) were licensed and trained in a health service provider subfield, but who reported

no current involvement in direct services, or (2) were not licensed but stated that they had received their doctorate in a practice-related subfield.

Given these criteria and the information available on members, attempts were made to derive estimates of the population of both clinically active and clinically trained personnel in psychology, rather than to simply report figures pertaining only to the APA membership. First, estimates were made of the numbers in the APA membership who were clinically trained, and what percentage of this group was clinically active. Practice Directorate files of State applications for Committee for the Advancement of Private Practice (CAPP) grants included counts of the numbers of licensed psychologists residing in each State making application. These numbers ostensibly represent unduplicated counts of doctoral-level psychologists for those States. These numbers were available for 38 of the 51 States (including the District of Columbia). Seventeen of the CAPP grant State counts were used in the accompanying tables.

The raw numbers of licensed psychologists reported by each State licensing board were used for the remaining 34 States. Each count was reduced by 13.8 percent, which is the representation of multiple licensures (licensed in more than one State) found among APA members. Thus, the estimate of clinically trained psychologists used in this chapter is based on a deliberate blend of several databases.

Using only APA counts of clinically trained psychologists would have yielded an unreasonably low count, one that was less than the number of clinically trained reported two years ago in an earlier version of this chapter. This did not make sense. Using only State licensing board raw counts of licensed psychologists would have resulted in what appeared to be an uncomfortably inflated count. This also did not make sense. There was little chance that psychology could have reached the State numbers based on the numbers currently graduating from the pipeline with doctoral degrees in appropriate fields in psychology.

These numbers represent estimates of the total numbers of clinically trained and clinically active psychologists overall, in each of the regions, and in each of the States. The percentages reported in the tables are based on the responses to the APA membership survey.

The number of clinically active psychologists in 1997 was derived by using the percentage of clinically trained APA members who were clinically active in 1995. This was done because the data and responses were noticeably more complete in 1995

than in 2002. The clinically active in 1997 were estimated at just under 76 percent of the clinically trained, or 55,493. In 2002, the clinically trained numbers were reduced by 25 percent to yield the clinically active estimates.

Qualifications of the Data As previously mentioned, the information reported in the tables in chapter 21 was based on analyses of the APA membership coupled with State-by-State data on the population of licensed psychologists, including those who did not belong to the APA. This strategy assumes that those who are licensed, but do not belong to the APA, are similar to licensed psychologists who do belong to the APA. Previous research on both APA and non-APA members indicated that the APA membership has been quite representative of doctoral-level providers in psychology with respect to demographic characteristics, education, and employment (Howard et al. 1986; Stapp, Tucker, and VandenBos 1985). Comparisons of member data with data from the National Science Foundation also revealed similarities for doctoral-level psychologists. See the National Science Foundation's biennial series of reports on the doctoral science and engineering population, *Characteristics of Doctoral Scientists and Engineers in the United States* (www.norc.uchicago.edu for the most recent years), for these national data. The growth in the membership of APA who report being active direct service providers parallels the national data on growth in degree production in the relevant fields as well as growth in employment settings focusing on service provision.

The number of clinically trained doctoral-level psychologists who are members of the APA was at least 61,304 in 2002. This was 69 percent of the estimated 88,491 clinically trained psychologists identified nationally for this chapter.

Because not all members responded to the APA membership survey, the extent to which the results are affected by nonresponse bias is unclear. Earlier comparisons of basic biographical information for nonrespondents with the data for respondents did not indicate marked differences with respect to highest degree, sex, and age. But conclusions could not be developed for information on employment. Thus, for example, we cannot be sure whether psychologists in certain types of employment settings were less likely to respond.

Psychological personnel at the master's, specialist, and baccalaureate levels also work in the general medical and mental health specialty areas. These individuals were not included in our analysis, first because the data are based on APA membership,

and this membership is not representative of those with less than a doctoral degree. Second, because the current licensing laws in most States require a doctorate in order to sit for licensure as a psychologist, this group is an increasingly small minority of psychologists qualified for the independent practice of psychology.

For additional information on the data presented in chapter 21 and on the characteristics of psychologists, please contact the Research Office, American Psychological Association, 750 First Street, NE, Washington, DC 20002, or call (202) 336-5980, visit the Web site at <http://research.apa.org>, or e-mail at research@apa.org.

Social Work

Data Collection for the National Association of Social Workers (NASW)

The data for this report were drawn from membership information and informed by the NASW PRN survey, 2000. Conducted in the spring of 2000, the NASW PRN survey captured demographic and practice data from a random sample of 2,000 regular members. Based on the sampling techniques and the high rate of response (81 percent), which minimized potential for selectivity and nonresponse bias, these results are highly representative of the membership. Table 1 is based on NASW membership data on the numbers of regular MSW and DSWs, excluding retirees, in 2000 (97,290). Table 2 reflects NASW membership data on the number of regular MSW and DSWs, excluding retirees, in the spring of 2002 (99,341). NASW membership data are collected from new applications and membership renewals. Tables 2 through 7 are based on the NASW membership count of regular MSW and DSW members (97,290), excluding retirees, in 2000 and informed by the NASW PRN survey, 2000. Table 8 reflects data from the Council on Social Work Education on the numbers of BSW, MSW, and DSW enrollees as well as degrees awarded from CSWE-accredited social work degree programs for the academic year 1998–99. The response rate for these data was 87.1 percent (Lennon 2001).

It is important to note that the numbers reported represent NASW members and that the universe of social workers is two to three times larger. Based on Census Bureau data, NASW has between 30 to 50 percent of the total number of trained social

workers as its members. Therefore, the numbers in the tables significantly understate the total numbers of trained social workers.

Psychiatric Nursing

This study uses a subset of the 1996 Division of Nursing's (DON) National Sample Survey of Registered Nurses data set. The methodology of this study has been extensively documented (DON 1997). Briefly, a complex stratified sampling design is used to randomly sample the population of registered nurses licensed in the United States. States are sampled at different rates to allow for State-level estimates. The disproportional stratified sampling methodology requires accounting for the design effect in analyses.

This subsample was based on the 29,766 respondents living and working in the United States. Requirements for sample selection included formal education as a clinical nurse specialist or nurse practitioner in psychiatric mental health nursing, with highest education in nursing being at either the master's or doctoral level; 194 nurses met these criteria. Further review showed that the DON had not classified three as advanced practice nurses. As master's education did not focus on a clinical practice area, these nurses were deleted, resulting in a sample size of 191. This is the sample used to determine general estimates on clinically trained psychiatric nurses. Of these, 173 were employed. This group was used to generate estimates on the employed subset of clinically trained psychiatric nurses. All estimates are reported for clinically trained nurses. Due to the small sample size, it would be difficult to get reliable estimates on the subgroup of clinically active nurses. It is estimated that there are 17,318 trained and 15,330 employed psychiatric nurses.

Analyses were weighted to the population using a standard statistical program for generating means and frequencies. Standard error estimation was conducted using the SUDANN software package to account for the study's design effect for selected variables.

Limitations of the study relate mainly to the small sample size. In addition, the number of settings variable reflects the number of nursing positions nurses hold. There is no information on settings of non-nursing positions. Nor is there any information on positions that include work in more than one setting.

Counseling

Counselors may be defined in a number of ways. The purpose of this report is to estimate the number of available counselors who have the training necessary to provide independent or team treatment of populations in need of therapeutic mental health intervention and prevention and who are credentialed to provide such treatment. Sources used in calculations are National Board for Certified Counselors (NBCC) *National Study of the Professional Counselor* (2000); NBCC *1998 State Counseling Licensure Board Survey*; United States Bureau of Census data (1999); American Counseling Association 2000 membership data; data base queries of NBCC; and *Counselor Preparation, 1999–2001: Programs, Faculty, Trends* 10th ed. (2000).

Most figures reflect a conservative estimate based on national certification, association membership, State licensure, and United States Bureau of Census data. These data inform the continued systematic collection of statistics about the counseling workforce. The collection of these data has reinforced the need for the counseling profession to collect systematic and equivalent data with other mental health professions.

Marriage and Family Therapy

Data Collection

The data for marriage and family therapy were collected from several sources: the American Association for Marriage and Family Therapy (AAMFT) Practice Research Network, Marriage and Family Therapist Practice Patterns Survey, the AAMFT Membership Database, the Annual Report for Accredited Programs submitted to the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), the California Association of Marriage and Family Therapists (CAMFT) Member Practice and Demographic Survey, and data collected by AAMFT from State marriage and family therapy regulatory boards on the number of licensed or certified marriage and family therapists (MFTs).

The count of MFTs for each State and the United States was derived from data collected by the AAMFT in 2000 and from State marriage and family therapy regulatory boards on the number of licensed or certified MFTs. For those States that did not regulate MFTs in 2000, the numbers were ob-

tained from the count of clinical members from the AAMFT Membership Database.

The count for the U.S. total (47,111) from table 3 was used for tables 1, 2, 4, 5, and 6, with the data on the details of these tables coming from the AAMFT Practice Research Network Survey conducted in the fall of 2000 and reported by Northey and Harrington (2001) and Northey (2002) and the CAMFT Member Practice and Demographic Survey reported by Riemersma (2002).

The data for table 7 were obtained from the Marriage and Family Therapist Practice Patterns Survey conducted by William J. Doherty of the Family Social Science Department of the University of Minnesota in the summer and fall of 1994 and reported by Doherty and Simmons (1996).

The data for table 8 come from a variety of sources, including the interns registered in the State of California; the Annual Report for Accredited Programs submitted to COAMFTE; a count of associate members (postdegree supervision students in other accredited programs) and student members (predegree students in other accredited programs) from the AAMFT Membership Database; and a survey of MFT graduate programs in the State of California.

The AAMFT Practice Research Network PRN Survey

The AAMFT PRN survey was conducted in September 2000. The survey, funded by the Center for Substance Abuse Treatment, consisted of 102 questions and focused on clinical practices, work settings, education, and demographics. The survey was conducted via telephone with 292 randomly selected clinical members of the AAMFT. Eighty-two percent of the eligible respondents participated in the survey.

The CAMFT Member Practice and Demographic Survey

The CAMFT Member Practice and Demographic Survey was conducted by in the spring of 2002. The survey was designed to assess the current clinical practice of MFTs in California; it was sent to 3,900 CAMFT members and yielded a 27 percent response rate. In addition to questions about demographics, clinical practice, works settings, and education, questions about funding sources and income were included.

The Marriage and Family Therapist Practice Patterns Survey

The Marriage and Family Therapist Practice Patterns Survey was commissioned by the AAMFT Research and Education Foundation and built upon an investigation of the clinical practice patterns of MFTs in Minnesota by Doherty and Simmons (1995). The survey consisted of three parts: (1) demographic, educational background, and practice setting information; (2) detailed information on the therapist's three most recently completed cases; and (3) client satisfaction and outcome data from clients. A total of 536 AAMFT clinical members from 15 States participated in the study, yielding a 34.3 percent response rate.

The AAMFT Membership Database

Data for the AAMFT Membership Database are collected from both applications for new membership and annual membership renewal forms. As the data are collected, they are entered into the membership database on a continuous basis.

Members of AAMFT are coded in the membership database according to their category of membership:

- **Clinical Membership**—persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution and have 2 years of postdegree supervised clinical experience in marriage and family therapy.
- **Associate Members**—persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution but have not yet completed two years of postdegree supervised clinical experience in marriage and family therapy. Associate membership is limited to five years, since it is anticipated that associate members will advance to clinical membership.
- **Student Membership**—persons currently enrolled in a qualifying graduate program in marriage and family therapy (or in a related

mental health field and a substantially equivalent course of study) in a regionally accredited educational institution or a COMAFTE-accredited graduate program or postdegree institute. Student membership is limited to 5 years, since it is anticipated that student members will advance to associate, then clinical membership.

- **Affiliate Membership**—members of allied professions and other persons interested in marriage and family therapy. Affiliate members come from related fields such as family medicine, family mediation, family policy, and research. The Affiliate membership is a noncredentialing, nonevaluative, and nonvoting membership category.

COAMFTE Annual Report for Accredited Programs

Annually, the programs accredited by COAMFTE submit standard written reports concerning compliance with the accreditation standards, including, among other data, a list of all students currently enrolled in the marriage and family therapy program. Data reported include the student's name, year in program, gender, ethnicity, and academic background. Data on the number of students in each program were collated for table 8 from the most recent annual report of the accredited programs, which was either 2000 or 2001.

School Psychology

Who Is Counted as a School Psychologist?

In most States, professional school psychologists are certified to practice within school settings and nonschool settings by each State's department of education. Every State has a certification for school psychology; however, some States use more than one title for professionals qualified to be called school psychologists. State-by-State standards for certification and licensure are published by the National Association of School Psychologists (NASP) (1995). Forty-seven States (including the District of Columbia) require academic standards consistent with the Nationally Certified School Psychologist

(NCSP) certification. One State, Hawaii, requires a doctorate to use the title. Three States require a master's degree with unspecified credit hours. All States require a supervised internship. Students graduating from NASP/National Council for Teacher Education-approved programs meet the NCSP credentialing standard and may receive the NCSP credential upon receiving a satisfactory score on the national examination. States that have upgraded their standards over the past 10 years have "grandparent" persons who do not meet the academic requirements of a 60-credit-hour master's or specialist degree, a 1,200-hour supervised internship, and other requirements noted in the body of the report.

Database

The data in this report are based on data gathered yearly by the U.S. Department of Education (USDOE) and found in its *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*. These data are required to be reported by each State education agency, which in turn has data reports from each local education agency. These data are required to be gathered to ensure that each school system is maintaining its effort to provide a "free and appropriate public education" to all children who are disabled and in need of special education and related services.

The data reported from each State education agency list as school psychologists only persons who are State certified or licensed. In fact, they consider person provisionally providing school psychological services under the category of unfilled positions.

NASP Membership Data

NASP total membership was 20,902 as of June 1998. NASP has several membership categories, of which three are critical to this report: regular, student, and retired.

Regular members must be one of the following:

- Currently credentialed and working as a school psychologist.
- Certified and working as a supervisor or consultant in school psychology.
- Primarily engaged in the training of school psychologists at a college or university.

- Excluding international membership, NASP regular membership as of June 1998 was 15,008.

Student membership includes students enrolled half-time or more in programs leading to an advanced degree or postmaster's certificate in school psychology or doctorate, as verified by their program advisor. Student membership as of June 1998 was 4,656.

Retired membership requires the retired school psychologist to have been a member for five consecutive years and retired from remunerative professional activity. Retired membership as of June 1998 was 737. It is presumed that these retired members are not clinically active in the profession of school psychology.

All regular and student members and all those holding an NCSP certificate must agree to abide by the NASP professional standards and code of ethics. By 1991, nearly 15,000 school psychologists had received the NCSP credential.

There are approximately 3,000 school psychologists certified as NCSP who are not members of NASP. As noted above, most State certification systems require the equivalent academic requirements of NCSP. Several States will now accept NCSP as the necessary documentation for State certification.

Data Reported in Tables

Each year, NASP requests that membership respond to a set of computer-recorded demographic questions, including age, sex, ethnicity, position, employment setting, salary, student service ratio, and years of experience. There is no obligation to respond to these requests, and more than 10 percent ignore all requests. Each of the 13 items is responded to at different rates, and therefore the accuracy of the data is unknown.

For example, only 13,827 responded to "employment setting," and only 9,634 responded to "years of experience." However, when the responses are compared to mailed random surveys carried out over the years (Curtis et al. in press; Fagan 1988; Reschly and Wilson 1992), the patterns are quite similar, giving a degree of assurance that these data can be applied to the general population of certified, employed, clinically active school psychologists reported by the USDOE.

To determine the 1994 number of school psychologists reported in table 1, the authors used the

ratio of NASP members who are certified, including those who are university trainers and administrators, to those who are not so specified. This produced a ratio of one clinically active to 1.11 clinically trained. The number reported by the USDOE was then multiplied by that ratio to secure the total of 22,214. This correction factor, based on more accurate data (Lund and Reschly 1998), replaces the 1.07:1 ratio applied to calculate the numbers reported in 1992. This 1.07:1 ratio was applied to USDOE data from 1988 for table 1 to provide some longitudinal reference consistent with other professions.

The data in tables 2, 4, 6, and 7 are based on ratios and percentages reported by NASP members' responses to the membership questionnaire applied, when appropriate, to the USDOE adjusted number. The data in table 3 are the State-by-State data reported for 1998, which are the best data that exist for school psychologists who are clinically active at the present time. Table 5 is based on the assumption that most school psychologists are limited to a single employment setting. This is generally the case. Since about 10 percent of school psychologists are licensed to practice outside the school setting, there may be a second setting for these professionals. However, NASP does not request any data on this factor. Therefore, "NA" is noted both for "two or more settings" and the "part-time" category.

Table 8 represents the number of school psychology students in programs approved by NASP/NCATE as reported by the Director of Certification from the NASP data base.

Qualifications of the Data

The USDOE data are a record of State-certified or licensed school psychologists reported for 1994–95 who serve children with disabilities in schools or school-related settings. These data are based on full-time equivalents rather than individuals. Therefore, there may be more individuals certified than this number. Furthermore, the data do not exclude some contracted persons. The data also may exclude school psychologists who do not provide services to children with disabilities under the Individuals with Disabilities Education Act. For example, school psychologists are employed in Head Start programs, which may be administered by another State agency. School psychologists serving under Part H, the infant and toddlers disability program, may not be included in this USDOE count. Finally, may States have school psychologists employed un-

der State pupil services laws and under Title I of the Improving America's School Act of 1994.

Without referencing the USDOE data, Fagan and Sachs-Wise (1994) report a consensus figure of between 20,000 and 22,000 school psychologists for 1994. It may be that these numbers underrepresent the total clinically active (and, thus, clinically trained) population of school psychologists by as much as five to 10 percent. This underestimation is consistent with the findings of Lund and Reschly (1998).

Adjusting the USDOE data required application of membership percentages to those data and to data provided by Lund and Reschly (1998). Since the membership data are consistent with the data on a random sample of 6,470 school psychologists (Curtis et al. in press; Reschly and Wilson 1992), it may be assumed that the membership data can be generalized to the USDOE data without any known bias.

The growth in the USDOE numbers over the seven-year span of 1988 to 1995 is progressive, but not dramatic. The number of elementary and secondary students is growing, thus causing a shift in the ratio of professionals to population. Table 3 should be read with extreme caution. It is erroneous to perceive the State population as the potential service population for school psychologists. School psychologists serve children aged 5 through 18, in general, and a subset of children aged 0 through 21 who have, or are at risk of having, a disability. The *Digest of Educational Statistics* (U.S. Department of Education 1997) estimates that there are about 52.7 million children aged 6 to 17, or about 19.6 percent of the 268.8 million total population in 1998 (*Statistical Abstract of the United States*, U.S. Bureau of the Census 1997).

References

- Curtis, M. J., Hunley, S. A., Walker, K., & Baker, A. C. (in press). *Demographic characteristics and professional practices in school psychology: 1994-95*.
- Doherty, W. J., & Simmons, D. S. (1995). Marriage and family therapists practice patterns survey. Washington, DC: American Association for Marriage and Family Therapy.
- Doherty, W. J., & Simmons, D. S. (1996). Clinical practice patterns of marriage and family therapists: A national survey of therapists and their clients. *Journal of Marital and Family Therapy*, 22, 9-25.
- Dorwart, R. A., Chartock, L. R., Dial, T. H., Fenton, W., Knesper, D., Koran, L. M., Leaf, P. J., Pincus, H. A., Smith, R., Weissman, S., & Winkelmeier, R. (1992). A national study of psychiatrists' professional activities. *American Journal of Psychiatry*, 149(11), 1499-1505.
- Fagan, T. K. (1988). The historical improvement of the school psychology service ratio: Implications for future employment. *School Psychology Review*, 17, 447-458.
- Fagan, T., & Sachs-Wise, P. (1994). *School psychology: Past, present and future*. White Plains, NY: Longman.
- Hollis, J. W., & Watz, R. A. (1993). *Counselor preparation 1993-1955: Vol. II. Status, trends, and implications*. 8th ed. Muncie, IN: Accelerated Development Press.
- Howard, A., Pion, G. M., Gottfredson, G. D., Flattau, P. E., Oskamp, S., Pfafflin, S. M., Bary, D. W., & Burstein, A. G. (1986). The changing face of American psychology: A report from the Committee on Employment and Human Resources. *American Psychologist*, 41, 1311-1327.
- Lennon, T. (2001). *Statistics on Social Work Education in the United States: 1999*. Alexandria, VA: Council on Social Work Education.
- Lund, A. R., & Reschly, D. J. (1998). School psychology personnel needs: Correlates of current patterns and historical trends. *School Psychology Review*, 27, 816-830.
- National Association of School Psychologists. (1995). Membership Database. Unpublished. Bethesda, MD.
- Reschly, D. J., & Wilson, M. S. (1992). *School Psychology Faculty and Practitioners: 1986 to 1991. Trends in Demographic Characteristics, Roles, Satisfaction, and System Reform*. Paper presented to the NASP Delegate Assembly.
- Stapp, J., Tucker, A. M., & VandenBos, G. R. (1985). Census of psychological personnel: 1983. *American Psychologist*, 40, 1317-1351.
- U.S. Department of Education. (1997). *Digest of educational statistics*. Washington, DC.
- Wilkinson, R. K. (1997). *Characteristics of doctoral scientists and engineers in the United States, 1995*. Washington, DC: National Science Foundation, Division of Science Resources Studies.
- Zarin, D. A., Pincus, H. A., Peterson, B. D., West, J. C., Suarez, A. P., Marcus, S. C., & McIntyre, J. S. (1998). Characterizing psychiatry with findings from the 1996 National Survey of Psychiatric Practice. *American Journal of Psychiatry*, 155, 397-404.